



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

stant in any one direction to give rise to new species, or even to well marked varieties.—CHARLES W. HARGITT, *Syracuse University, Syracuse, N. Y.*

**Cross and self-fertilization.**—In a series of experiments, still in progress at this college, on the fertilization of the common petunia, the following results were obtained from the first generation.

One dozen petunias of equal vigor were selected from the greenhouse cuttings, and put into pots of equal size, and subjected to exactly the same conditions. About half of the plants were the dull purple variety, nearly the original type, while the others were variegated and somewhat modified. Each blossom was very carefully excluded from accidental fertilization, by being tied in a paper bag, or by having the corolla tied together tightly until the capsule had begun to develop.

There were three series of experiments. The blossoms of series I were self-fertilized; those in series II were fertilized from other blossoms on the same plant; and in series III they were fertilized from other plants.

Series I bore capsules averaging 1.8 centigrams in weight, series II bore capsules averaging 2.7 cgms. in weight, and series III bore capsules averaging 4.1 cgms.

In series I and III, the seeds of the plain purple and the variegated specimens were weighed separately, showing the variegated to be lighter. In series I the purple weighed 0.7 cgm. more than the variegated in the same series. In series III the purple bore capsules 0.2 cgm. heavier than the variegated in the same series.

It was also noted that many more capsules in series III developed and ripened perfectly than in either series I or II; while series I ripened the smallest percentage of capsules. Owing to various accidents no definite figures could be obtained to show the exact proportions.

Thus it may be inferred that even in the first generation the deteriorating effects of self-fertilization are plainly shown; and also the tendency of much modified plants to decline in vigor and productiveness.

Darwin, in his book on cross and self-fertilized plants, page 189, says: "In crossing six blossoms, there were six seed capsules produced, weighing 4.44 grains; while six others were self-fertilized, producing only three capsules weighing but 1.49 grains."

This experiment is interesting from the fact that it agrees with Darwin's very similar experiment on the same plants.—MINNIE REED, *State Agricultural College, Manhattan, Kas.*